



E-cigarettes: further flavours of controversy within the controversy

Although some observers have alluded to an emerging public health consensus in the UK regarding the potential for e-cigarettes to reduce tobacco-related harms, controversy emerged when major UK public health organisations seemed to send out conflicting messages regarding the devices. The Royal College of Physicians (RCP) in February, 2016, advocated that it was important to promote e-cigarettes “as widely as possible as a substitute for smoking in the UK”. However, the National Institute for Health and Clinical Excellence, in draft guidance published in September, 2017, suggested clinicians should advise that, although some smokers have found e-cigarettes helpful to quit smoking, “there is currently little evidence on the long-term benefits or harms of these products”. Several media outlets recognised the contrasting interpretations of the current evidence base. In October, 2017, member of parliament (MP) Norman Lamb, Chair of the UK Parliamentary Science and Technology Committee, said regarding e-cigarettes that “there are still significant gaps in the research guiding their regulation and sale”.

Further ongoing controversies have involved the UK All Party Parliamentary Group (APPG) for e-cigarettes and their interactions with the tobacco industry. The WHO Framework Convention on Tobacco Control Article 5.3, to which the UK is a signatory, advises that politicians do not interact unnecessarily with the tobacco industry, subsequent to the industry withholding scientific knowledge about the harms of smoking tobacco over several decades. Therefore the revelation that the Chair of the APPG for e-cigarettes, MP for Rugby Mark Pawsey, accepted approximately £1650 of hospitality from Japanese Tobacco International, owners of the e-cigarette brand E-Lites, provoked controversy. According to the Register of Member's Financial Interests, Pawsey accepted the hospitality in October, 2015. In December, 2016, the British Medical Association (BMA) questioned the propriety of the same APPG receiving secretariat support worth £18500 from the UK Vaping Industry Association (UKVIA). The UKVIA represent the interests, among others, of the tobacco companies, Philip Morris, British American Tobacco, Imperial Brands, and Japanese Tobacco International. This further unnecessary interaction with the tobacco industry is contrary to the spirit of Article 5.3 of the Framework Convention on Tobacco Control. The BMA described the support as an unhealthy influence of the tobacco industry over this parliamentary group.

The 2016 National Smoking Cessation and Training Centre (NCSCT) updated guidelines for e-cigarettes underline that, although the flavourings used in e-cigarette fluids are normally considered safe for oral ingestion, the

effects of their long-term inhalation are largely unknown. The NCSCT advise that “There are some flavours where a degree of risk is established and so these flavours should be avoided”; these include cinnamon flavourings. Dr Rachel Behar (University of California, Berkley, CA, USA) and colleagues, first showed the potential for cinnamon flavoured e-cigarette fluids to be cytotoxic in March, 2014.

New data published in January, 2017, relating to a potential increased risk of male infertility from exposure to cinnamon e-cigarette fluids was met with skepticism from Professor Peter Hajek (Wolfson Institute of Preventative Medicine, Queen Mary University of London, London, UK) who stated that “There are no known adverse effects on fertility from exposure to cinnamon apple pies or chewing gum...the most likely impact of misinforming smokers about risks of vaping is that they carry on smoking.”

In March, 2017, allegations of irresponsible marketing tactics by elements of the e-cigarette industry were made by Dr Konstantinos Farsalinos, who stated in his blog “I wonder if there is anyone who thinks that the use of cartoons and funny graphics...is not going to be perceived as appealing, and an attempt to actively promote the products, to youth...this is absolutely unacceptable and a clear indication of irresponsible behaviour”.

Data from the US Centres for Disease Control and Prevention suggested that the number of high school students in the USA who were current users of e-cigarettes rose from 2.46 million in 2014 to 3 million in 2015.



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For more on **mixed messaging in the UK regarding e-cigarettes** see <http://www.bmj.com/content/358/bmj.j4460>

For the **WHO FCTC Guidelines** see http://www.who.int/fctc/guidelines/article_5_3.pdf

For more on **Mark Pawsey's receipt of hospitality** see <http://www.mirror.co.uk/news/uk-news/tory-mp-heaps-praise-e-7023311>

For more on **UKVIA's support for the APPG for e-cigarettes** see <http://www.bma.org.uk/news/2016/november/an-unhealthy-interest-in-e-cigarettes>

For the **NCSCT Guidelines** see http://www.ncsct.co.uk/publication_electronic_cigarette_briefing.php

For more on **the harms of cinnamon e-liquid flavourings** see *Toxicology in Vitro* 2014; **28**:198-208

For **Professor Hajek's comments on cinnamon flavourings** see <http://ash.org.uk/media-and-news/ash-daily-news/ash-daily-news-for-09-january-2017/>

For more on **Dr Farsalinos' allegations** see <http://www.ecigarette-research.org/research/index.php/whats-new/2017/251-indus>

For the **CDC data on e-cigarette use** see https://www.cdc.gov/tobacco/infographics/youth/pdfs/youth-tobacco-use.pdf?s_cid=bb-osh-youth-graphic-008

For the **US Surgeon General's report** see https://e-cigarettes.surgeongeneral.gov/documents/2016_sgr_full_report_non-508.pdf

For **Bauld and colleagues' comments** see https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/311491/Ecigarette_uptake_and_marketing.pdf

For data on the proportion of never-smoking children who have vaped see *Public Health* 2017; 149: 45–48

For Bauld and colleagues' study on e-cigarettes as a gateway to smoking see *Int J Environ Res Public Health* 2017; 14: 973.

For Conner and colleagues' study see <http://tobaccocontrol.bmj.com/content/early/2017/07/28/tobaccocontrol-2016-053539>

For the RSPH investigation into e-cigarette shops see <https://www.rsph.org.uk/about-us/news/undercover-investigation-finds-9-in-10-vape-shops-prepared-to-sell-to-non-smokers.html>

For the meta-analysis on use of e-cigarettes and subsequent smoking see *JAMA Pediatr* 2017; 171: 788–797

In December, 2016, the US Surgeon General published a report stating that "E-cigarette use among youth and young adults has become a public health concern."

Continued controversy surrounds the uptake of vaping in those children who are deemed unlikely to ever smoke cigarettes. In 2014, Professor Linda Bauld (University of Stirling, Stirling, UK) and colleagues, writing in a Public Health England document, stated that there was no evidence at the time to suggest that non-smoking children were taking up vaping, but that "longitudinal research will be required" to confirm this. Although subsequent data suggested that the proportion of never-smoking youth who have ever used an e-cigarette is increasing in the UK, Bauld and colleagues in August, 2017, claimed that there was still no evidence to suggest a gateway from e-cigarettes to smoking cigarettes in UK youth; however, the five surveys that were used to make this conclusion were not longitudinal. Meanwhile, a longitudinal study by Professor Mark Conner and colleagues (University of Leeds, Leeds, UK) also published in August 2017, found that "Ever use of e-cigarettes was robustly associated with initiation but more modestly related to escalation of cigarette use." This added further supportive data to a systematic review and meta-analysis of longitudinal studies, also published in August, 2017, which showed a lack of overall consensus in the UK relating to this issue.

A 2017 Royal Society for Public Health undercover investigation identified that nine out of ten e-cigarette shops in the UK are selling products to adults who have never smoked or vaped. The Independent British Vape Trade Association inform sellers in their Code of Conduct that "Vape products are for current or former smokers and existing users of vaping devices, therefore never knowingly sell to anyone who is not a current or former smoker, or a current vaper." Considering e-cigarette's addictive potential, the scant evidence-base relating to their efficacy as quitting aids, and their potential for adverse health effects, reckless and irresponsible sales tactics used by e-cigarette outlets will continue to stimulate calls from many in public health, research, and academia for a precautionary perspective to be applied to e-cigarettes.

**David Bareham, Keivan Ahmadi, Mathieu Elie, Arwel W Jones, Martin McKee*

Lincolnshire Community Health Services NHS Trust, Louth County Hospital, Louth LN11 0EU, UK (DB); School of Pharmacy (KA), School of Chemistry (ME), and Lincoln Institute for Health (AWJ), University of Lincoln, Lincoln, UK; and London School of Hygiene and Tropical Medicine, London, UK (MM)

david.bareham@lincs-chs.nhs.uk

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